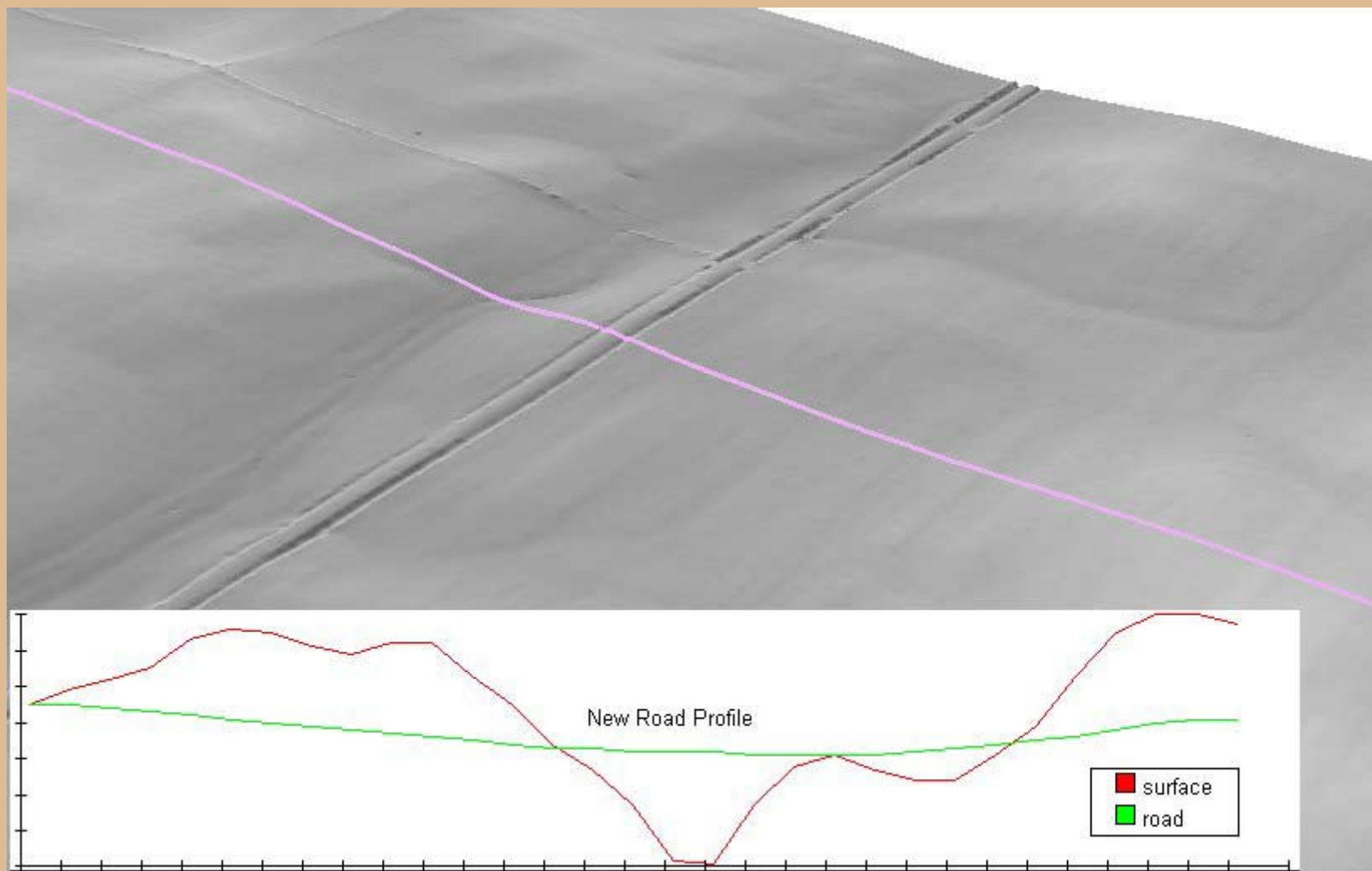


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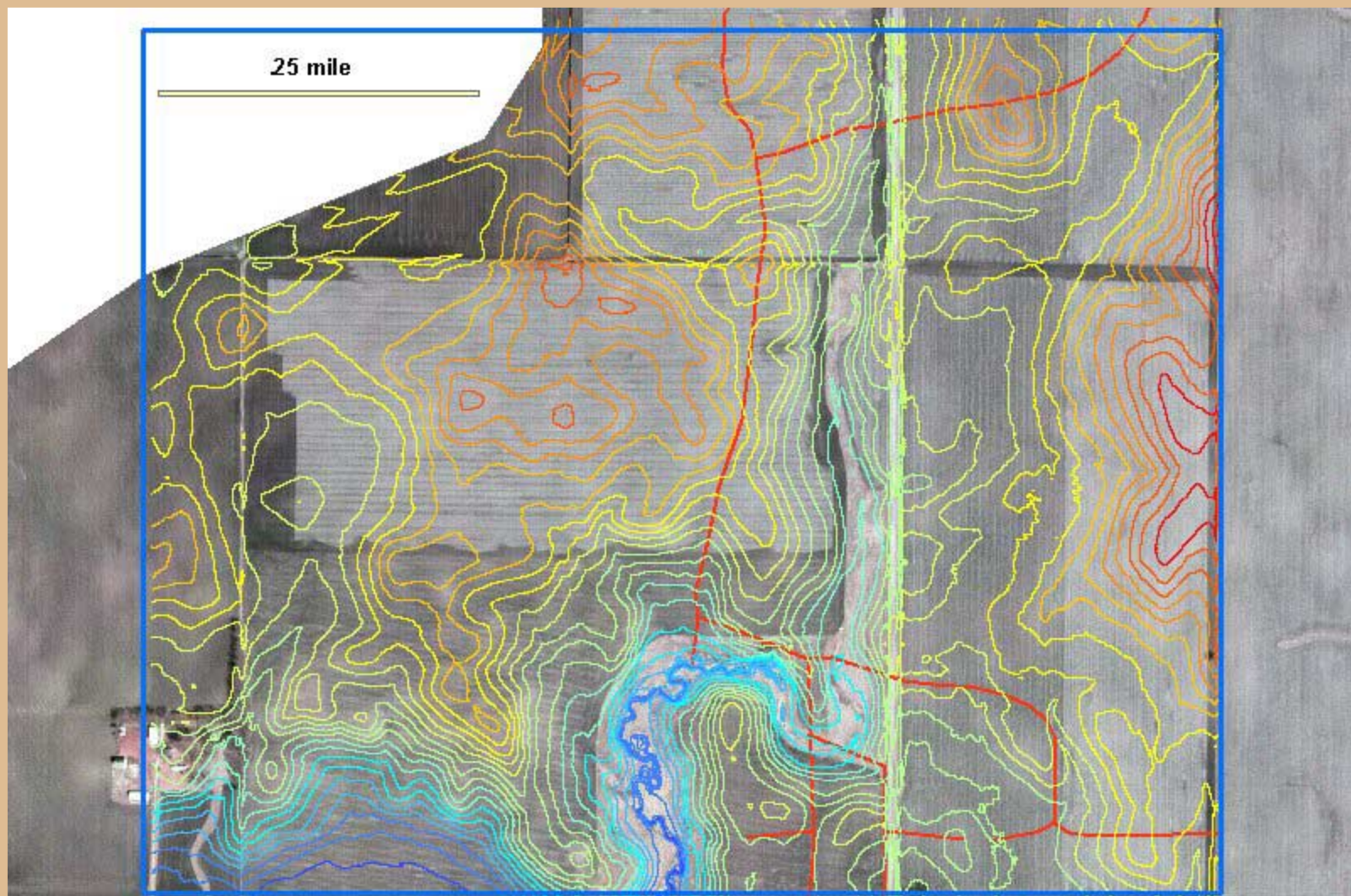


Slide courtesy of USGS







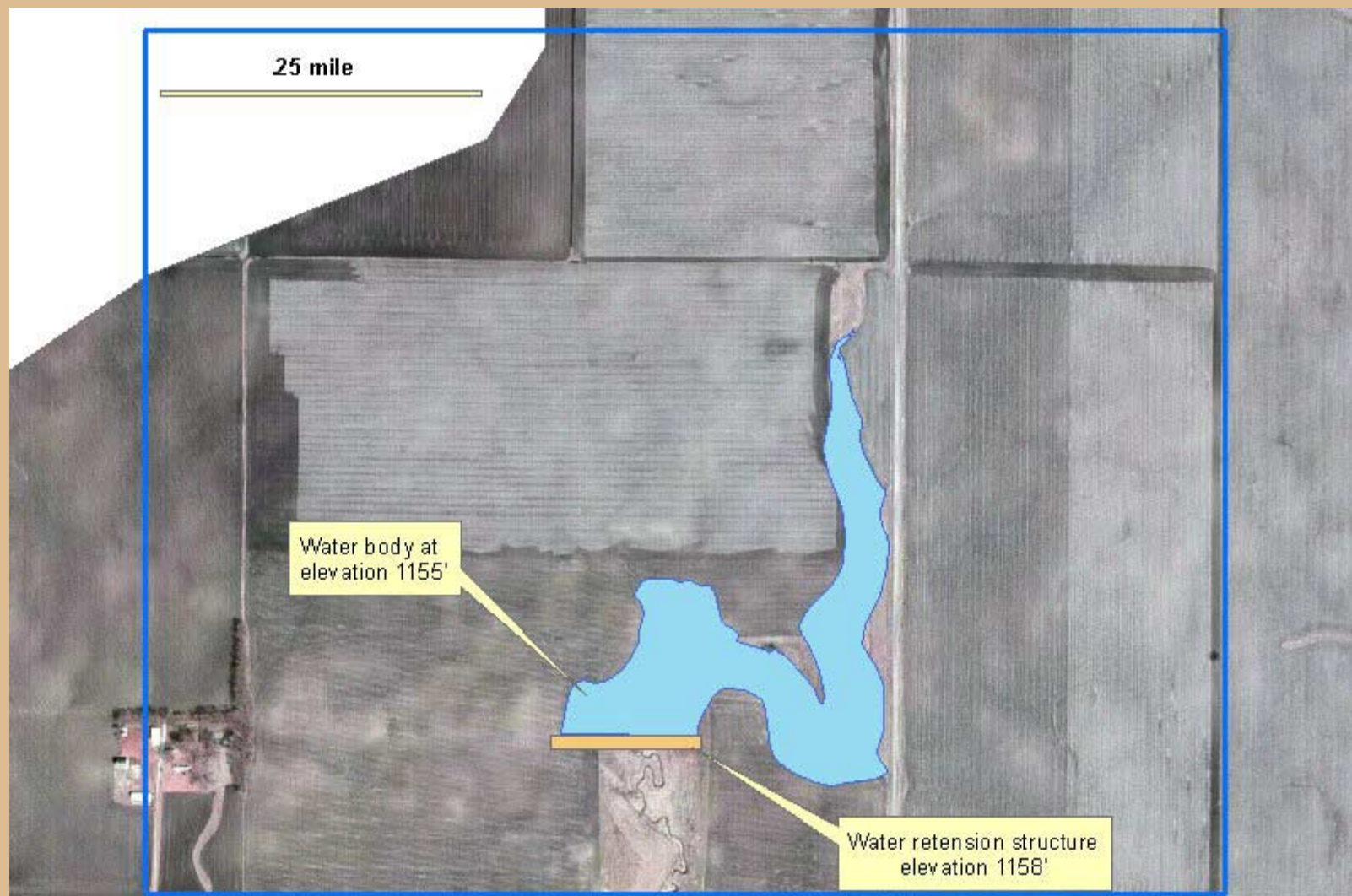


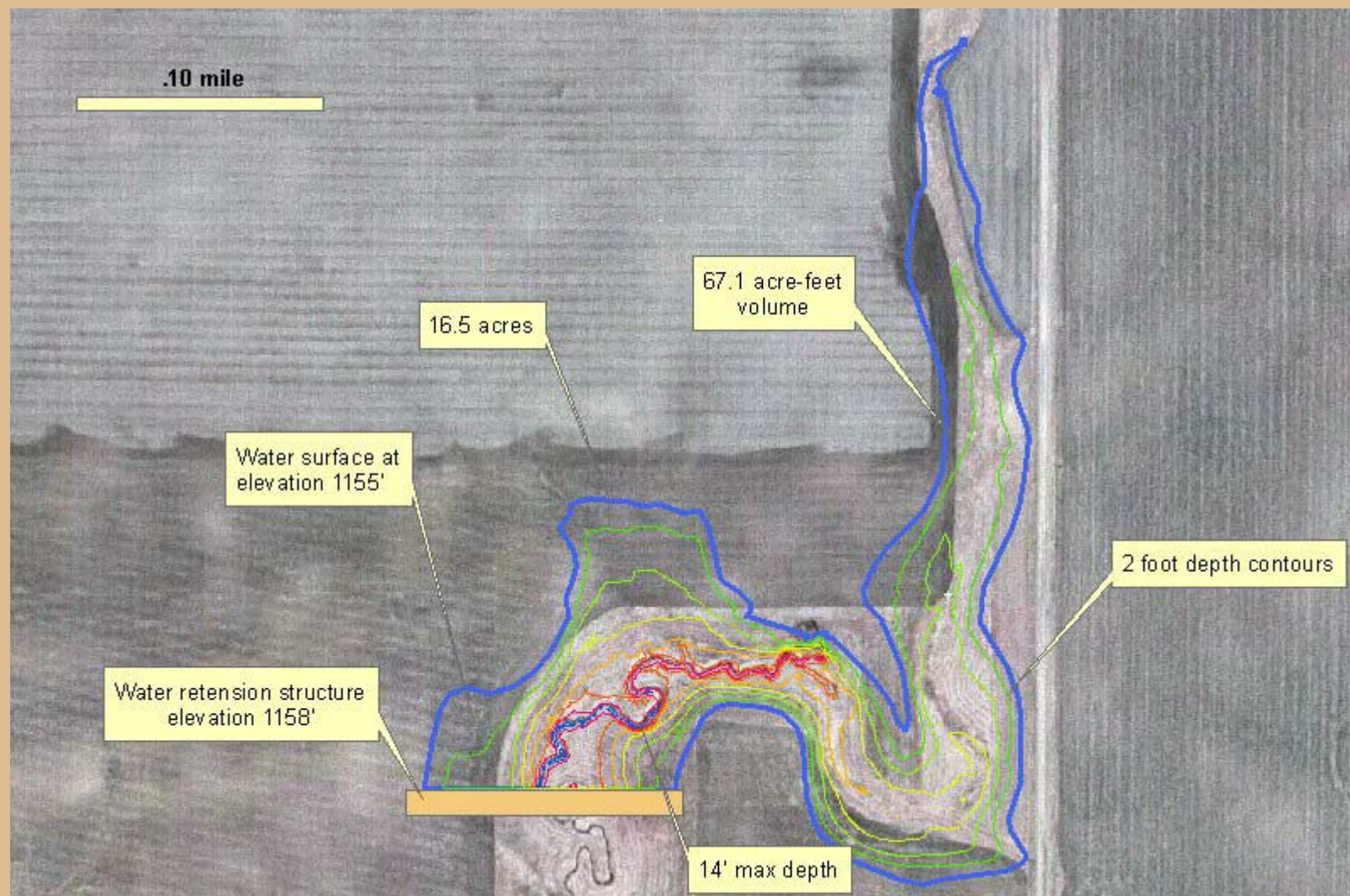
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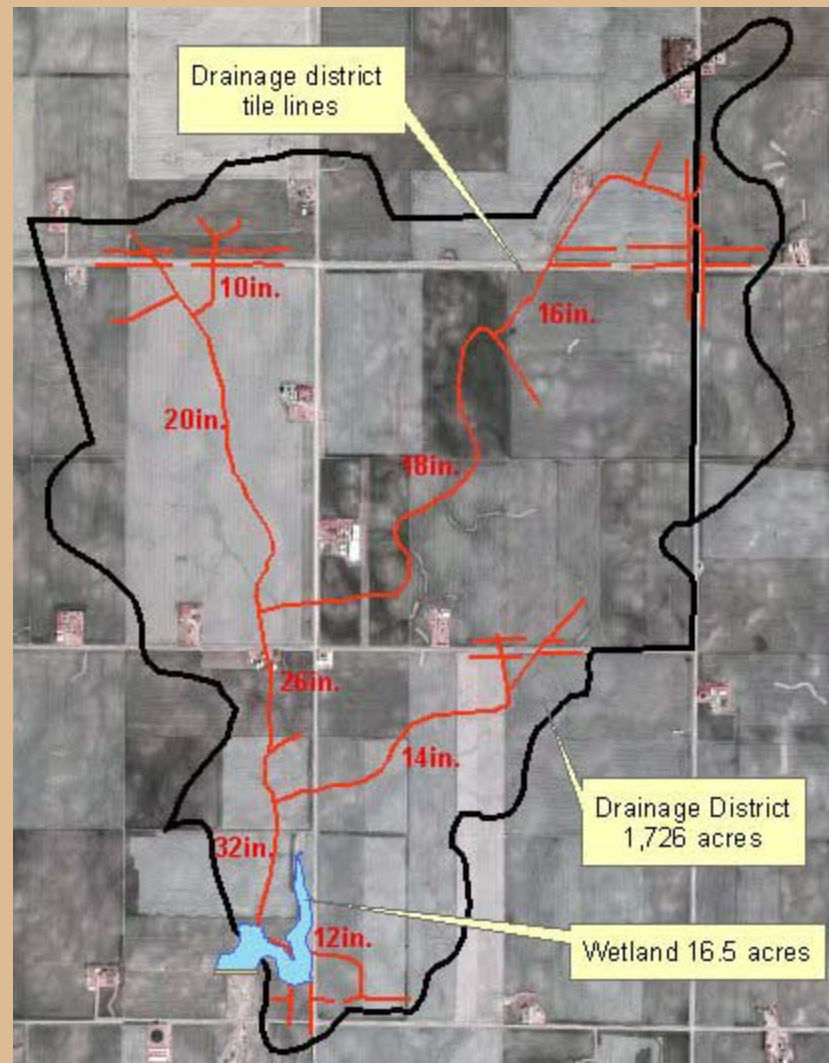
Slide courtesy of USGS











# Potential Applications

- **Infrastructure Planning**
  - Roadway siting, planning, and estimating
  - Utility line siting, planning, and estimating
  - Construction site planning and estimating
  - Soil conservation structure (terraces, sediment ponds, etc.) planning and estimating
- **Risk Assessment**
  - Floodplain and flood insurance mapping
  - Erosion potential measurements and modeling
  - Emergency management and response planning
    - Dam breach inundation areas
    - Levee analysis
    - Spill Routing



# Potential Applications

- **Permit Process Improvement**
  - Animal Feeding Operation w/ regards to floodplains and slope
  - Air emission permitting
  - Floodplain permitting for industrial/residential construction
- **Education/Research**
  - Environmental Science
    - Watershed Modeling
    - Runoff Modeling
    - Conservation practice performance
  - Engineering
    - Construction site planning
    - Development/use of automated planning tools

# LiDAR in Iowa?

- Price is coming down
  - USGS sole-source contract with Sanborn, August 2005
  - Productizes LiDAR
    - Price for Iowa changed from \$18 million to \$3 million overnight (\$0.5 to \$0.085 per acre)
    - Iowa was the 5<sup>th</sup> state to contact USGS 2 days after the contract was announced.
    - Base products only
      - Cities/Counties can leverage project to increase accuracy or number of products



# LiDAR in Iowa?

- 2-foot contours will meet National Map Accuracy Standards
- Meets FEMA flood plain guidelines
- Full state acquisition-
  - LiDAR + hi-resolution aerial photography + data processing + internet delivery to Iowans
    - \$ 6 million (\$1.5 million x four years)

# LiDAR in Iowa?

- Funding options for LiDAR
  - Cities/Counties on their own?
    - Much higher cost per area of data collection
    - Many will simply not be able to afford leading to scattered, inconsistent collection across Iowa
  - Partnerships?
    - Done successfully for 2002 CIR project (\$1.4 million)
    - Higher costs make partnerships more difficult
  - State appropriation?

- Contact:**

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